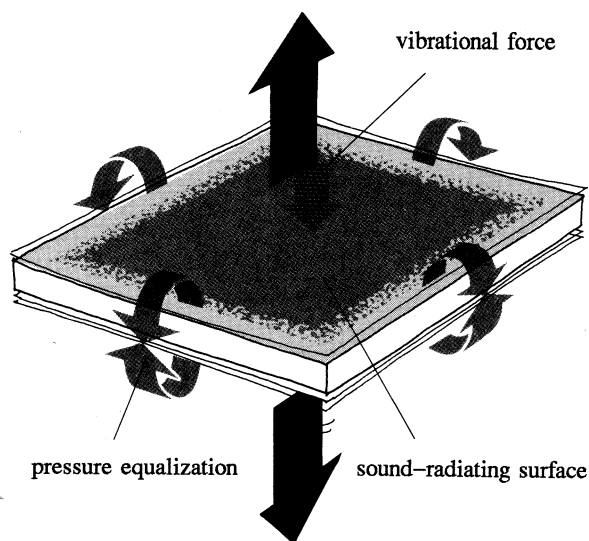


A LONG, NARROW PLATE PRODUCES LESS SOUND THAN A SQUARE ONE

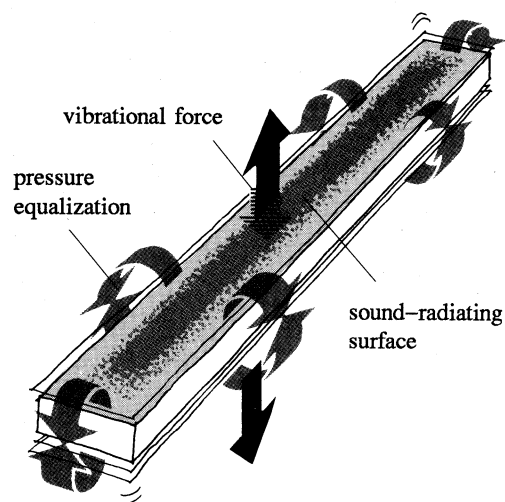
When a plate is set into vibration, excess air pressure forms on one side of the plate and then the other. Sound comes from both sides. The pressure difference balances out close to the edges so that the radiation there is slight. Thus, a long, narrow plate radiates less sound than a square plate.

Principle

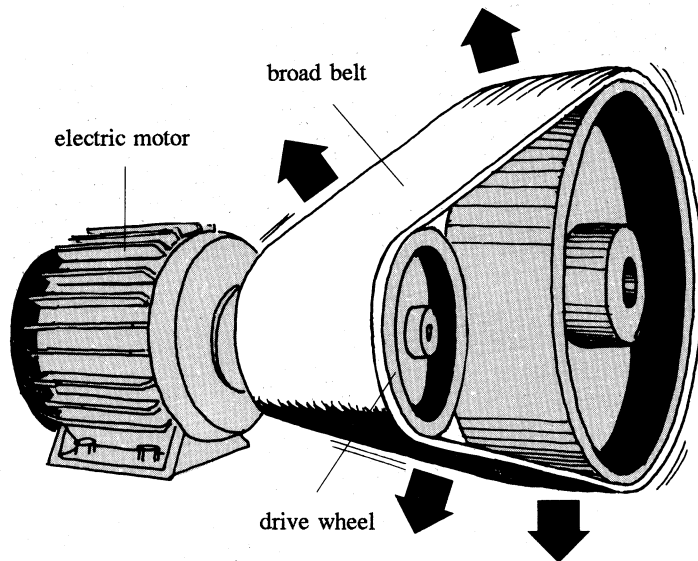
square vibrating plate



long and narrow vibrating plate

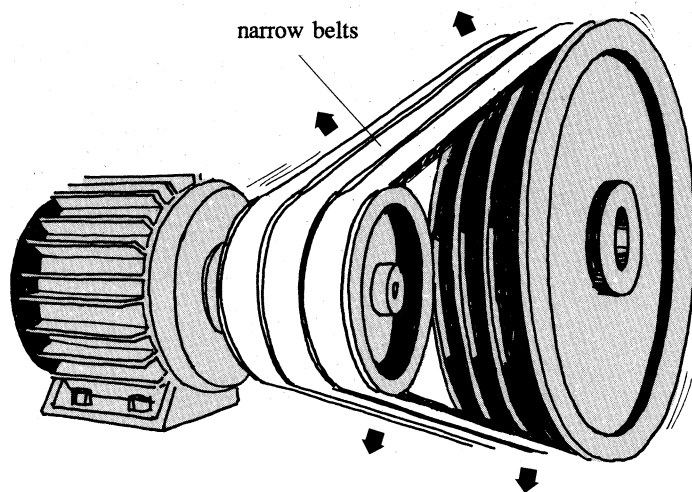


Application with drive belts



Example

A belt drive creates a large amount of low frequency noise because of the vibration of the broad belt.



Control Measure

The broad drive belt is replaced by narrower belts separated by spacers. This reduces the noise radiated.